UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/878,207	06/12/2001	Tokio Kamimura	48864-040	2120

7590 07/09/2004	EXAMINER
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Please find below and/or attached an Office communication concerning this application or proceeding.

PTO 90C (Rev 10/03)

	Application No.	Applicant(s)
Office Action Summary	09/878,207	KAMIMURA ET AL.
	Examiner	**Art Unit**	
	Phu K. Nguyen	2671	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _06 September 2001_.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1-26_ is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) _1-26_ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☒ All   b)☐ Some * c)☐ None of:

      1.☒ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _paper #4_. *#* 2

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over MERRILL et al. (6,369,821) in view of SUTTON et al. (6,539,354).

As per claim 1, Merrill teaches the claimed "communication system for performing a conversation with an actual or fictional human, animal, doll, character or the like virtualized by using a computer, comprising: a client and a server" (Merrill, column 5, lines 32-46; column 17, lines 9-20), wherein "the client includes: an input portion for inputting a first message addressed from a user to the human or the like; a transmitting portion for transmitting the first message (Merrill, column 3, line 30 to column 4, line 10; column 33, lines 32-40 – computer 20 with access to a network); a receiving portion for receiving a second message and facial animation of the human or the like, the second message being addressed from the human or the like to the user as a response to the first message (Merrill, column 15, lines 40-65; column 35, lines 25-40 – request and receive the animation data); an output portion for outputting the second message to the user; and a display portion for displaying the facial animation" (Merrill, column 36, line 66 to column 37, line 10), and "the server includes: a storing portion for storing facial image data of the human or the like, a receiving portion for receiving the first message (Merrill, column 33, lines 53-66 – a remote computer provides the animation data), a first generating portion for generating the second message in

response to the reception of the first message, a second generating portion for generating motion control data, a third generating portion for generating the facial animation (Merrill, column 11, lines 44-61; column 23, lines 1-30; column 35, lines 28-60 – generation of the animation data of a character); and a transmitting portion for transmitting the second message and the facial animation" (Merrill, column 33, line 41 to column 34, line 18). It is noted that Merrill does not teach the facial animation data is "based on the motion control data and the facial image data". Sutton teaches that in speech synchronization, the facial animation data is "based on the motion control data and the facial image data" (Sutton, column 8, lines 6-49). It would have been obvious to a person of ordinary skill in the art at the time the invention was made, in view of the teaching of Sutton (column 6, lines 42-62), to configure Merrill's system as claimed because the generation of facial animation of a speech, in which the animation is based on motion control and facial image data, provides a realistic, and natural visual appearance of human speech in which the voice and the human facial vision synchronously represents the speech.

Claim 2 adds into claim 1 "the server is provided with a storing portion for storing person information as information concerning the human or the like, and the first generating portion generates the second message with reference to the person information concerning the human or the like" (Merrill, column 15, lines 40-46).

Claim 3 adds into claim 2 "the server is provided with a storing portion for storing

sentence information as information for generating a conversation sentence, and the

first generating portion extracts such sentence information that are likely to be used for

a response from the human or the like to the first message and generates the second

message" (Merrill, column 23, lines 1-9).

Claim 4 adds into claim 1 wherein the facial image data are data represented by

a three-dimensional model so structured as to move, and the third generating portion

causes a structured part of the three-dimensional model to move based on the motion

control data, which Merrill does not explicitly teach. However, Sutton teaches that in

speech synchronization, the facial image data are data represented by a three-

dimensional model and the facial animation data is "based on the motion control data"

(Sutton, column 3, lines 12-18; column 8, lines 6-49). It would have been obvious to a

person of ordinary skill in the art at the time the invention was made, in view of the

teaching of Sutton (column 6, lines 42-62), to configure Merrill's system as claimed

because the generation of facial animation of a speech, in which the animation is based

on motion control, provides a realistic, and natural visual appearance of human speech

in which the voice and the human facial vision synchronously represents the speech.

As per claim 5, Merrill teaches the claimed "communication system for

performing a conversation with an actual or fictional human, animal, doll, character or

the like virtualized by using a computer, comprising: a client and a server" (Merrill,

column 5, lines 32-46; column 17, lines 9-20), wherein "the client includes: an input portion for inputting a first message addressed from a user to the human or the like; a transmitting portion for transmitting the first message (Merrill, column 3, line 30 to column 4, line 10; column 33, lines 32-40 – computer 20 with access to a network); a receiving portion for receiving a second message and facial animation of the human or the like, the second message being addressed from the human or the like to the user as a response to the first message (Merrill, column 15, lines 40-65; column 35, lines 25-40 – request and receive the animation data); an output portion for outputting a second message to the user, the second message being addressed from the human or the like to the user as a response to the first message; and a display portion for displaying the facial animation" (Merrill, column 36, line 66 to column 37, line 10), and "the server includes: a storing portion for storing facial image data of the human or the like, a receiving portion for receiving the first message (Merrill, column 33, lines 53-66 – a remote computer provides the animation data), a first generating portion for generating the second message in response to the reception of the first message, a second generating portion for generating motion control data (Merrill, column 11, lines 44-61; column 23, lines 1-30; column 35, lines 28-60 – generation of the animation data of a character); and a transmitting portion for transmitting the second message and the motion control data" (Merrill, column 33, line 41 to column 34, line 18). It is noted that Merrill does not teach "a generating portion for generating facial animation of the human or the like based on the motion control data and the facial image data". Sutton teaches that in speech synchronization, the facial animation data is "based on the motion control

data and the facial image data" (Sutton, column 8, lines 6-49). It would have been obvious to a person of ordinary skill in the art at the time the invention was made, in view of the teaching of Sutton (column 6, lines 42-62), to configure Merrill's system as claimed because the generation of facial animation of a speech, in which the animation is based on motion control and facial image data, provides a realistic, and natural visual appearance of human speech in which the voice and the human facial vision synchronously represents the speech.

Claim 6 adds into claim 5 "wherein the server is provided with a storing portion for storing person information as information concerning the human or the like, and the first generating portion generates the second message with reference to the person information concerning the human or the like" (Merrill, column 15, lines 40-46).

Claim 7 adds into claim 6 "wherein the server is provided with a storing portion for storing sentence information as information for generating a conversation sentence, and the first generating portion extracts such sentence information that are likely to be used for a response from the human or the like to the first message and generates the second message" (Merrill, column 23, lines 1-9).

As per claim 8, Merrill teaches the claimed "communication system for performing a conversation with an actual or fictional human, animal, doll, character or

the like virtualized by using a computer, comprising: a client and a server" (Merrill,

column 5, lines 32-46; column 17, lines 9-20), wherein "the client includes: a storing

portion for storing facial image data of the human or the like; an input portion for

inputting a first message addressed from a user to the human or the like; a transmitting

portion for transmitting the first message (Merrill, column 3, line 30 to column 4, line 10;

column 33, lines 32-40 – computer 20 with access to a network); a receiving portion for

receiving the second message, the facial image data and motion control data (Merrill,

column 15, lines 40-65; column 35, lines 25-40 – request and receive the animation

data); an output portion for outputting a second message to the user, the second

message being addressed from the human or the like to the user as a response to the

first message; and a display portion for displaying the facial animation" (Merrill, column

36, line 66 to column 37, line 10), and "the server includes: a receiving portion for

receiving the first message (Merrill, column 33, lines 53-66 – a remote computer

provides the animation data), a first generating portion for generating the second

message in response to the reception of the first message; a second generating portion

for generating the motion control data (Merrill, column 11, lines 44-61; column 23, lines

1-30; column 35, lines 28-60 – generation of the animation data of a character); ; and a

transmitting portion for transmitting the second message and the motion control data"

(Merrill, column 33, line 41 to column 34, line 18).   It is noted that Merrill does not teach

a generating portion for generating facial animation of the human or the like based on

the motion control data and the facial image data. Sutton teaches that in speech

synchronization, the facial animation data is "based on the motion control data and the

facial image data" (Sutton, column 8, lines 6-49). It would have been obvious to a

person of ordinary skill in the art at the time the invention was made, in view of the

teaching of Sutton (column 6, lines 42-62), to configure Merrill's system as claimed

because the generation of facial animation of a speech, in which the animation is based

on motion control and facial image data, provides a realistic, and natural visual

appearance of human speech in which the voice and the human facial vision

synchronously represents the speech.

Claim 9 adds into claim 8 "wherein the server is provided with a storing portion

for storing person information as information concerning the human or the like, and the

first generating portion generates the second message with reference to the person

information concerning the human or the like" (Merrill, column 15, lines 40-46).

Claim 10 adds into claim 9 "wherein the server is provided with a storing portion

for storing sentence information as information for generating a conversation sentence,

and the first generating portion extracts such sentence information that are likely to be

used for a response from the human or the like to the first message and generates the

second message" (Merrill, column 23, lines 1-9).

As per claim 11, Merrill teaches the claimed "server used for a communication

system for performing a conversation with an actual or fictional human, animal, doll,

character or the like virtualized by using a computer" (Merrill, column 5, lines 32-46; column 17, lines 9-20), the server comprising: a storing portion for storing facial image data of the human or the like; a receiving portion for receiving a first message addressed from a user to the human or the like (Merrill, column 33, lines 53-66 – a remote computer provides the animation data), a first generating portion for generating a second message, the second massage being addressed from the human or the like to the user as a response to the first message; a second generating portion for generating motion control data; a third generating portion for generating facial animation (Merrill, column 11, lines 44-61; column 23, lines 1-30; column 35, lines 28-60 – generation of the animation data of a character); and a transmitting portion for transmitting the second message and the facial animation" (Merrill, column 33, line 41 to column 34, line 18). It is noted that Merrill does not teach the facial animation data is "based on the motion control data and the facial image data". Sutton teaches that in speech synchronization, the facial animation data is "based on the motion control data and the facial image data" (Sutton, column 8, lines 6-49). It would have been obvious to a person of ordinary skill in the art at the time the invention was made, in view of the teaching of Sutton (column 6, lines 42-62), to configure Merrill's system as claimed because the generation of facial animation of a speech, in which the animation is based on motion control and facial image data, provides a realistic, and natural visual appearance of human speech in which the voice and the human facial vision synchronously represents the speech.

Claim 12 adds into claim 11 wherein the facial image data are data represented

by a three-dimensional model so structured as to move, and the third generating portion

causes a structured part of the three-dimensional model to move based on the motion

control data which Merrill does not explicitly teach. However, Sutton teaches that in

speech synchronization, the facial image data are data represented by a three-

dimensional model and the facial animation data is "based on the motion control data"

(Sutton, column 3, lines 12-18; column 8, lines 6-49). It would have been obvious to a

person of ordinary skill in the art at the time the invention was made, in view of the

teaching of Sutton (column 6, lines 42-62), to configure Merrill's system as claimed

because the generation of facial animation of a speech, in which the animation is based

on motion control, provides a realistic, and natural visual appearance of human speech

in which the voice and the human facial vision synchronously represents the speech.

As per claim 13, Merrill teaches the claimed "server used for a communication

system for performing a conversation with an actual or fictional human, animal, doll,

character or the like virtualized by using a computer" (Merrill, column 5, lines 32-46;

column 17, lines 9-20), the server comprising: a storing portion for storing facial image

data of the human or the like; a receiving portion for receiving a first message

addressed from a user to the human or the like (Merrill, column 33, lines 53-66 – a

remote computer provides the animation data), a first generating portion for generating

a second message, the second message being addressed from the human or the like to

the user as a response to the first message; a second generating portion for generating

motion control data (Merrill, column 11, lines 44-61; column 23, lines 1-30; column 35,

lines 28-60 – generation of the animation data of a character); a transmitting portion for

transmitting the second message and the motion control data" (Merrill, column 33, line

41 to column 34, line 18). It is noted that Merrill does not explicitly teach the facial image

data is "moved in accordance on the motion control data". Sutton teaches that in

speech synchronization, the facial image data is "based on the motion control data and

the facial image data" (Sutton, column 8, lines 6-49). It would have been obvious to a

person of ordinary skill in the art at the time the invention was made, in view of the

teaching of Sutton (column 6, lines 42-62), to configure Merrill's system as claimed

because the generation of facial animation of a speech, in which the animation is based

on motion control and facial image data, provides a realistic, and natural visual

appearance of human speech in which the voice and the human facial vision

synchronously represents the speech.

As per claim 14, Merrill teaches the claimed "server used for a communication

system for performing a conversation with an actual or fictional human or like virtualized

by using a computer" (Merrill, column 5, lines 32-46; column 17, lines 9-20), the server

comprising: a receiving portion for receiving a first message addressed from a user to

the human or the like (Merrill, column 33, lines 53-66 – a remote computer provides the

animation data), a first generating portion for generating a second message, the second

message being addressed from the human or the like to the user as a response to the

first message; a second generating portion for generating motion control (Merrill,

column 11, lines 44-61; column 23, lines 1-30; column 35, lines 28-60 – generation of

the animation data of a character); and a transmitting portion for transmitting the second

message and the motion control data" (Merrill, column 33, line 41 to column 34, line 18).

It is noted that Merrill does not explicitly teach the facial image data is "moved in

accordance on the motion control data". Sutton teaches that in speech synchronization,

the facial image data is "based on the motion control data and the facial image data"

(Sutton, column 8, lines 6-49). It would have been obvious to a person of ordinary skill

in the art at the time the invention was made, in view of the teaching of Sutton (column

6, lines 42-62), to configure Merrill's system as claimed because the generation of facial

animation of a speech, in which the animation is based on motion control and facial

image data, provides a realistic, and natural visual appearance of human speech in

which the voice and the human facial vision synchronously represents the speech.

As per claim 15, Merrill teaches the claimed "client used for a communication

system for performing a conversation with an actual or fictional human, animal, doll,

character or the like virtualized by using a computer" (Merrill, column 5, lines 32-46;

column 17, lines 9-20), wherein ", the client comprising: an input portion for inputting a

first message addressed from a user to the human or the like; a transmitting portion for

transmitting the first message (Merrill, column 3, line 30 to column 4, line 10; column 33,

lines 32-40 – computer 20 with access to a network); a receiving portion for receiving

the second message, facial image data indicating a face of the human by using image

data and motion control data for causing the facial image data to move in accordance

with the second message (Merrill, column 15, lines 40-65; column 35, lines 25-40 –

request and receive the animation data); an output portion for outputting a second

message, the second message being addressed from the human or the like to the user

as a response to the first message; a generating portion for generating facial animation

of the human or the like; and a display portion for displaying the facial animation"

(Merrill, column 36, line 66 to column 37, line 10). It is noted that Merrill does not

teach the facial animation data is "based on the motion control data and the facial image

data". Sutton teaches that in speech synchronization, the facial animation data is

"based on the motion control data and the facial image data" (Sutton, column 8, lines 6-

49). It would have been obvious to a person of ordinary skill in the art at the time the

invention was made, in view of the teaching of Sutton (column 6, lines 42-62), to

configure Merrill's system as claimed because the generation of facial animation of a

speech, in which the animation is based on motion control and facial image data,

provides a realistic, and natural visual appearance of human speech in which the voice

and the human facial vision synchronously represents the speech.

Claim 16 adds into claim 15 wherein the facial image data are data represented

by a three-dimensional model so structured as to move, and the third generating portion

causes a structured part of the three-dimensional model to move based on the motion

control data which Merrill does not explicitly teach. However, Sutton teaches that in

speech synchronization, the facial image data are data represented by a three-dimensional model and the facial animation data is "based on the motion control data" (Sutton, column 3, lines 12-18; column 8, lines 6-49). It would have been obvious to a person of ordinary skill in the art at the time the invention was made, in view of the teaching of Sutton (column 6, lines 42-62), to configure Merrill's system as claimed because the generation of facial animation of a speech, in which the animation is based on motion control, provides a realistic, and natural visual appearance of human speech in which the voice and the human facial vision synchronously represents the speech.

As per claim 17, Merrill teaches the claimed "communication system for performing a conversation with watching a partner's animation comprising: a host computer and a plurality of terminal devices" (Merrill, column 5, lines 32-46; column 17, lines 9-20), wherein each of the terminal devices includes: a transmission and reception portion for transmitting and receiving a message (Merrill, column 3, line 30 to column 4, line 10; column 33, lines 32-40 – computer 20 with access to a network); a first receiving portion for receiving image data, a second receiving portion for receiving motion control data (Merrill, column 15, lines 40-65; column 35, lines 25-40 – request and receive the animation data); a display portion for displaying animation generated by moving the image data" (Merrill, column 36, line 66 to column 37, line 10), and a host computer includes: a receiving portion for receiving a message (Merrill, column 33, lines 53-66 – a remote computer provides the animation data), a generating portion for generating the motion control data based on the translated message (Merrill, column

11, line 62 to column 12, line 2; column 23, lines 1-30; column 35, lines 28-60 –

generation of the animation data of a character's speech); a translation portion for

translating the received message into another natural language (Merrill, column 23,

lines 9-28); a first transmitting portion for transmitting the translated message and a

second transmitting portion for transmitting the image data and the motion control data

of one of the terminal devices in communication to another one of the terminal devices

in the communication" (Merrill, column 33, line 41 to column 34, line 18).   It is noted

that Merrill does not teach the facial animation data is "based on the motion control

data". Sutton teaches that in speech synchronization, the facial animation data is

"based on the motion control data" (Sutton, column 8, lines 6-49). It is also noted that

Merrill does not teach the message is a voice. Sutton also teaches in details the

speech synthesis which translate the message in form of voice into another natural

language (Sutton, column 17, lines 33-43). It would have been obvious to a person of

ordinary skill in the art at the time the invention was made, in view of the teaching of

Sutton (column 6, lines 42-62), to configure Merrill's system as claimed because the

generation of facial animation of a speech, in which the animation is based on motion

control, provides a realistic, and natural visual appearance of human speech in which

the voice and the human facial vision synchronously represents the speech.

Claim 18 adds into claim 17 wherein the facial image data are data represented

by a three-dimensional model so structured as to move, and the third generating portion

causes a structured part of the three-dimensional model to move based on the motion

control data which Merrill does not explicitly teach. However, Sutton teaches that in speech synchronization, the facial image data are data represented by a three-dimensional model and the facial animation data is "based on the motion control data" (Sutton, column 3, lines 12-18; column 8, lines 6-49). It would have been obvious to a person of ordinary skill in the art at the time the invention was made, in view of the teaching of Sutton (column 6, lines 42-62), to configure Merrill's system as claimed because the generation of facial animation of a speech, in which the animation is based on motion control, provides a realistic, and natural visual appearance of human speech in which the voice and the human facial vision synchronously represents the speech.

As per claim 19, Merrill teaches the claimed "host computer used for a communication system for performing a conversation with watching partner's animation" (Merrill, column 5, lines 32-46; column 17, lines 9-20), the host computer comprising: a transmission and reception portion for transmitting and receiving a message (Merrill, column 33, lines 53-66 – a remote computer provides the animation data), a generating portion for generating motion control data used for making facial image data move (Merrill, column 11, line 62 to column 12, line 2; column 23, lines 1-30; column 35, lines 28-60 – generation of the animation data of a character's speech including the phonemes of the synthesized audio); a translation portion for translating the received voice into another natural language (Merrill, column 23, lines 9-28); a first transmitting portion for transmitting the translated message; and a second transmitting portion for

transmitting the image data and the motion control data of one of the terminal devices in

communication to another one of the terminal devices in the communication" (Merrill,

column 33, line 41 to column 34, line 18). It is noted that Merrill does not teach the

facial animation data is "based on the motion control data and the translated message".

Sutton teaches that in speech synchronization, the facial animation data is "based on

the motion control data and the translated message" (Sutton, column 8, lines 6-49). It is

also noted that Merrill does not teach the message is a voice. Sutton also teaches in

details the speech synthesis which translate the message in form of voice into another

natural language (Sutton, column 17, lines 33-43). It would have been obvious to a

person of ordinary skill in the art at the time the invention was made, in view of the

teaching of Sutton (column 6, lines 42-62), to configure Merrill's system as claimed

because the generation of facial animation of a speech, in which the animation is based

on motion control, provides a realistic, and natural visual appearance of human speech

in which the voice and the human facial vision synchronously represents the speech.

As per claim 20, Merrill teaches the claimed "communication system for

performing a conversation with watching partner's animation, comprising: a host

computer and a plurality of terminal devices" (Merrill, column 5, lines 32-46; column 17,

lines 9-20), wherein each of the terminal devices includes: a first transmission and

reception portion for transmitting and receiving a message (Merrill, column 3, line 30 to

column 4, line 10; column 33, lines 32-40 – computer 20 with access to a network); a

storing portion for storing image data; a second transmission and reception portion for

transmitting and receiving the image data (Merrill, column 15, lines 40-65; column 35, lines 25-40 – request and receive the animation data); a generating portion for generating motion control data; and a display portion for displaying animation" (Merrill, column 36, line 66 to column 37, line 10), and the host computer includes: a receiving portion for receiving a message (Merrill, column 33, lines 53-66 – a remote computer provides the animation data), a translation portion for translating the received message into another natural language (Merrill, column 11, lines 44-61; column 23, lines 1-30; column 35, lines 28-60 – generation of the animation data of a character including the phonemes of the synthesized audio); and a transmitting portion for transmitting the translated message" (Merrill, column 33, line 41 to column 34, line 18). It is noted that Merrill does not teach the facial animation data is "based on the motion control data and the translated message". Sutton teaches that in speech synchronization, the facial animation data is "based on the motion control data and the translated message" (Sutton, column 8, lines 6-49). It is also noted that Merrill does not teach the message is a voice. Sutton also teaches in details the speech synthesis which translate the message in form of voice into another natural language (Sutton, column 17, lines 33-43). It would have been obvious to a person of ordinary skill in the art at the time the invention was made, in view of the teaching of Sutton (column 6, lines 42-62), to configure Merrill's system as claimed because the generation of facial animation of a speech, in which the animation is based on motion control, provides a realistic, and natural visual appearance of human speech in which the voice and the human facial vision synchronously represents the speech.

As per claim 21, Merrill teaches the claimed "communication method" (Merrill,

column 5, lines 32-46; column 17, lines 9-20), comprising the steps of: preparing

animation in a first terminal device connected to a network; transmitting a message

signal of a sentence comprised in a natural language from a second terminal device to a

host computer via the network (Merrill, column 3, line 30 to column 4, line 10; column

33, lines 32-40 – computer 20 with access to a network); receiving the sentence of the

transmitted message signal in the host computer so as to translate the sentence into a

sentence comprising another language, generating a voice signal corresponding to the

translated sentence, generating a motion control signal of animation corresponding to

the voice signal of the translated sentence (Merrill, column 11, lines 44-61; column 23,

lines 1-30; column 35, lines 28-60 – generation of the animation data of a character

including the phonemes of the synthesized audio); and transmitting the generated voice

signal and the generated motion control signal from the host computer to the first

terminal device via the network; and receiving the transmitted voice signal and the

transmitted motion control signal in the first terminal device so as to output a voice

corresponding to the voice signal" (Merrill, column 33, line 41 to column 34, line 18). It

is noted that Merrill does not teach the facial animation data is "based on the motion

control signal". Sutton teaches that in speech synchronization, the facial animation data

is "based on the motion control signal" (Sutton, column 8, lines 6-49). It is also noted

that Merrill does not teach the message signal is a voice signal. Sutton also teaches in

details the speech synthesis, which translate the message in form of voice into another

natural language (Sutton, column 17, lines 33-43).

Claim 22 adds into claim 21 " wherein the animation indicates a face of a human"

which Merrill teaches in column 4, lines 26-28.

Claim 23 adds into claim 22 "wherein the motion control signal is a signal for

controlling a motion of a mouth of the animation corresponding to the translated

sentence" which Merrill does not explicitly teach. However, Sutton teaches that in

speech synchronization, the facial animation data including the mouth motion is "based

on the motion control data" (Sutton, column 3, lines 12-18; column 8, lines 6-49). It

would have been obvious to a person of ordinary skill in the art at the time the invention

was made, in view of the teaching of Sutton (column 6, lines 42-62), to configure

Merrill's system as claimed because the generation of facial animation of a speech, in

which the animation is based on motion control, provides a realistic, and natural visual

appearance of human speech in which the voice and the human facial vision

synchronously represents the speech.

Claim 24 adds into claim 21 "the animation moves in accordance with the output

of the voice" which Merrill does not explicitly teach. However, Sutton teaches that in

speech synchronization, the facial animation data is "based on the motion control data

related to the output voice" (Sutton, column 3, lines 12-18; column 8, lines 6-49). It

would have been obvious to a person of ordinary skill in the art at the time the invention

was made, in view of the teaching of Sutton (column 6, lines 42-62), to configure

Merrill's system as claimed because the generation of facial animation of a speech, in

which the animation is based on motion control related to output voice, provides a

realistic, and natural visual appearance of human speech in which the voice and the

human facial vision synchronously represents the speech.

As per claim 25, Merrill teaches the claimed "communication method" (Merrill,

column 5, lines 32-46; column 17, lines 9-20), comprising the steps of: receiving a

message signal of a sentence comprised in a natural language from a terminal device

(Merrill, column 33, lines 53-66 – a remote computer provides the animation data),

translating the sentence of the received message signal into a sentence comprising

another natural language; (Merrill, column 11, lines 44-61; column 23, lines 1-30;

column 35, lines 28-60 – generation of the animation data of a character including the

phonemes of the synthesized audio); generating a voice signal corresponding to the

translated sentence; generating a motion control signal of animation corresponding to

the generated voice signal (Merrill, column 23, lines 14-30); transmitting the generated

voice signal and the generated motion control signal to another terminal device" (Merrill,

column 33, line 41 to column 34, line 18). It is noted that Merrill does not teach the

message is a voice. Sutton also teaches in details the speech synthesis which translate

the message in form of voice into another natural language (Sutton, column 17, lines

33-43). It would have been obvious to a person of ordinary skill in the art at the time the

invention was made, in view of the teaching of Sutton (column 6, lines 42-62), to

configure Merrill's system as claimed because the generation of facial animation of a

speech, in which the input speech signal is a voice signal, provides a realistic, and

natural visual appearance of human speech in which the voice and the human facial

vision synchronously represents the speech.

As per claim 26, Merrill teaches the claimed "communication method" (Merrill,

column 5, lines 32-46; column 17, lines 9-20), comprising the steps of: receiving a

message signal of a sentence comprised in a natural language from a terminal device

(Merrill, column 33, lines 53-66 – a remote computer provides the animation data),

translating the sentence of the received message signal into a sentence comprising

another natural language; (Merrill, column 11, lines 44-61; column 23, lines 1-30;

column 35, lines 28-60 – generation of the animation data of a character including the

phonemes of the synthesized audio); generating a voice signal corresponding to the

translated sentence(Merrill, column 23, lines 14-30); transmitting the generated voice

signal to another terminal device" (Merrill, column 33, line 41 to column 34, line 18). It

is noted that Merrill does not teach the message is a voice. Sutton also teaches in

details the speech synthesis which translate the message in form of voice into another

natural language (Sutton, column 17, lines 33-43). It would have been obvious to a

person of ordinary skill in the art at the time the invention was made, in view of the

teaching of Sutton (column 6, lines 42-62), to configure Merrill's system as claimed

because the generation of facial animation of a speech, in which the input speech signal

is a voice signal, provides a realistic, and natural visual appearance of human speech in

which the voice and the human facial vision synchronously represents the speech.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly
claiming the subject matter which the applicant regards as his invention.

Regarding claims 1, 2, 5, 6, 8, 9, 11, 13, 14, 15, ..., the phrase "or the like"

renders the claim(s) indefinite because the claim(s) include(s) elements not actually

disclosed (those encompassed by "or the like"), thereby rendering the scope of the

claim(s) unascertainable. See MPEP § 2173.05(d). Similarly, in claims 3, 7, 10, the

word "likely" renders the claims indefinite.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Phu K. Nguyen whose telephone number is (703)305 - 9796. The examiner can normally be reached on M-F 8:00-4:30.

The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Phu K. Nguyen
June 20, 2004